## REMARKS

Prior to this Reply, Claims 1-3, 5-12, 30, 32 and 34-43 were pending. Through this Reply, Claims 12, 30 and 36-43 have been amended; Claims 2 and 7-11 have been cancelled; and, Claims 44-49 have been added. Accordingly, Claims 1, 3, 5, 6, 12, 30, 32 and 34-49 are now at issue in the present case.

### I. Claim Objections

The Examiner objected to Claims 37, 42 and 43 due to certain informalities. Specifically, the Examiner believes that: (1) in Claim 37, line 3, the word "transferred" should be deleted; (2) in Claim 42, line 15, the word "to" should be replaced with the word –for– for grammatical correctness; and, (3) in Claim 43, line 27, the word "to" should be replaced with the word –for– for grammatical correctness.

In response, Applicants have amended Claims 37, 42 and 43 in accordance with the Examiner's suggestions. Therefore, Applicants believe that the objections to such claims have been overcome.

### II. Allowable Subject Matter

In the Office Action, the Examiner stated that Claims 42 and 43 are allowed. Furthermore, the Examiner objected to Claims 2, 7-11, 40 and 41 as being depending upon a rejected base claim. However, the Examiner indicated that such claims would be allowable if they were rewritten in independent form to include all of the limitations of their respective base claims and any intervening claims.

In response, Applicants have cancelled objected-to Claim 2 and have introduced new independent Claim 44, which substantially includes the limitations of Claims 1 and 2. Similarly, Applicants have cancelled objected-to Claim 7 and have introduced new independent Claim 45, which substantially includes the limitations of Claims 1 and 7. Further, Applicants have cancelled Claims 8-11 and have introduced corresponding Claims 46-49, which depend from new Claim 45.

Applicants also note that objected-to Claim 40 has been rewritten in independent form to substantially include all of the limitations of Claim 1. Finally, objected-to Claim 41 has been rewritten in independent form to substantially include all of the limitations of Claim 30.

## III. Rejections Under 35 U.S.C. § 102(e)

The Examiner rejected Claims 1, 3, 5, 6, 12, 30, 32 and 34-36 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,567,233 to Chew et al. (hereinafter "Chew"). Applicants respectfully traverse the Examiner's rejection because the rejected claims include limitations that are not disclosed by Chew.

**With respect to Claim 1,** Chew does not disclose: "one or more head interfaces, each head interface electrically connected to a transducer head for controlling the transducer head for data read and/or write operations;" and "a mode controller electrically connected to each head interface, for controlling the operation of each head interface for selectively reading data from at least one recording surface via at least one transducer head while writing data to at least one recording surface via at least one transducer head."

Chew is directed to a shock-sensing method in magnetic hard-disk drives to maintain data integrity when a drive is subjected to external shocks. It uses a modified head preamplifier to

detect servo fields from adjacent disk surfaces, as well as the disk surface being written or read. When a write head is writing data to a data field on a disk surface, a read head may be reading a servo field from an adjacent surface, insuring that the write head is on-track. By staggering the servo fields from surface to surface, shock may be sensed by measuring displacement of read heads on adjacent surfaces between servo sectors on the write surface.

In Col. 7, lines 50-60 (relied on by the Examiner to reject Claim 1), Chew states:

> In the present invention, read electronics 456 may be modified from the prior art to read servo sector data from adjacent tracks during a write operation. During a write operation, read electronics 456 may signal, through serial interface 455 and serial interface 431, to read/write head enable, to *alternately* read servo data from MR read heads 415 through 414. Thus, for example, in a single disk (two surface) embodiment, *servo data may be alternately read from staggered servo sectors on alternate sides of a disk by toggling between read heads 414 and 415*. Read/write head enable 432 may be modified to allow selection of different read heads during a write operation. (Emphasis added).

As the above passage clearly indicates, Chew discloses reading servo data from two sides of a disk in an alternate fashion. This is done by toggling between read heads on the two sides of the disk to double the effective servo sampling rate. However, Chew does not disclose or require "one or more head interfaces, each head interface electrically connected to a transducer head for controlling the transducer head for data read and/or write operations;" and "a mode controller electrically connected to each head interface, for controlling the operation of each head interface for selectively reading data from at least one recording surface via at least one transducer head while writing data to at least one recording surface via at least one transducer head," as required by Claim 1.

For at least the above reasons, Applicants submit that Claim 1 is patentably distinguishable from Chew. For at least the same reasons, Applicants believe that the claims that depend from Claim 1 are likewise patentably distinguishable from Chew.

**With respect to Claim 3**, Chew does not disclose that: "the mode controller controls the operation of the head interfaces based on configuration information, wherein the configuration information includes data transfer mode and transducer head selection information," as required by Claim 3. The serial interface 431 in Chew is not configurable to use configuration information. The serial interface 431 is hardwired to toggle reading of servo information between the heads 414 and 415. The serial interface 431 cannot be configured based on configuration information to use different data transfer modes because the serial interface 431 repeatedly performs the same hardwired steps.

No configuration information is sent to the serial interface 431 from the host that changes the way the serial interface 431 works. In Col. 7, lines 29-31, Chew states: "Instructions from the host CPU may include instructions to read from or write to the disk, to a particular file, sector or the like." Chew appears to be stating the CPU may send read and/or write commands to the disk drive for data transfer as is usual in any disk data input/output command. This does not appear to have anything to do with configuration information for head interfaces, wherein the configuration information includes data transfer mode and head selection information, as claimed by Claim 3.

For at least the above reasons, Applicants submit that Claim 3 is patentably distinguishable from Chew. **Claim 32** was rejected for similar reasons to those provided in rejecting Claim 3. Accordingly, Applicants submit that Claim 32 is patentably distinguishable from Chew, at least, for reasons similar to those provided with respect to Claim 3.

**With respect to Claim 5**, Chew does not disclose: "a control interface connected to the mode controller, the control interface for receiving configuration information wherein the mode controller controls the operation of the head interfaces based on the configuration information," as required by Claim 5. As noted in relation to Claim 3, the serial interface 431 in Chew is not configurable to use configuration information. The serial interface 431 cannot be configured based on configuration information to use different data transfer modes because the serial interface 431 repeatedly performs the same hardwired steps. Similarly, the serial interface 455 does not provide configuration information to the serial interface 431. Serial interface 455 is also hardwired to perform the same operations over in causing toggling of the read heads 414 and 415 in reading servo data.

Further, instructions from the host CPU may include instructions to read from or write to the disk, to a particular file, sector or the like (Chew, Col. 7, lines 23-32). Nowhere in Chew is it disclosed that the channel 402 receives configuration information from a mode controller. The channel 402 (along with the interface 455) simply receives CPU instructions and not configuration information that can change the configuration of how the interfaces 431, 455 toggle the reading of servo information between the heads 411, 415. As discussed above, the CPU instructions do not comprise configuration information.

For at least the above reasons, Applicants submit that Claim 5 is patentably distinguishable from Chew. **Claim 34** was rejected for reasons similar to those provided with respect to Claim 5. Therefore, Applicants believe that Claim 34 is patentably distinguishable from Chew, at least, for reasons similar to those provided with respect to Claim 5.

**Claim 30** was rejected for reasons similar to those provided in connection with Claim 1. Accordingly, Applicants submit that Claim 30 is patentably distinguishable from Chew, at least,

for reasons similar to those provided with respect to Claim 1. Applicants note, however, that independent Claim 30 has been amended to further clarify that the mode controller controls the head interfaces for selectively reading data from at least one recording surface via at least one transducer head while writing data to at least another recording surface via at least one transducer head.

**Claim 36** was rejected for reasons similar to those presented in connection with Claim 1. Therefore, Applicants submit that Claim 36 is patentably distinguishable from Chew, at least, for the reasons provided above with respect to Claim 1.

The Examiner also rejected Claims 30, 32 and 34-39 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,693,760 to Krounbi et al. (hereinafter "Krounbi"). Applicants respectfully traverse the rejection because Krounbi does not disclose all of the limitations of the rejected claims.

**With respect to Claim 30,** Krounbi does not disclose: "a mode controller electrically connected to each head interface and responsive to the servo controller, for controlling the operation of each head interface based on configuration information for selectively reading data from at least one recording surface via at least one transducer head while writing data to at least another recording surface via at least one transducer head," as required by Claim 30. Krounbi appears to disclose reading while writing on the same disk surface and not reading from a disk surface while writing on another disk surface (see, e.g., Krounbi at Col. 9, lines 7-27; Fig. 8B shows that same head is used for read while writing on the same surface (i.e., control data 011 for HEAD#1 and control data 111 for HEAD#2)). For at least these reasons, Applicants submit that Claim 30 is patentably distinguishable from Krounbi.

**With respect to Claim 37**, Krounbi does not disclose "reading the reference pattern from the reference disk via a transducer head and using the read servo clock and the servo position information to position and maintain one or more other transducer heads on one or more said data disk recording surfaces while writing final servo patterns onto said one or more data disk recording surfaces." Krounbi at Col. 9, lines 7-27 and Fig. 8B shows that same head is used for reading while writing on the same surface.

For at least these reasons, Applicants submit that Claim 37 is patentably distinguishable from Krounbi. Applicants also believe that Claims 38 and 39 are patentably distinguishable from Krounbi, at least, for reasons similar to those provided with respect to Claim 37, since Claims 38 and 39 depend therefrom.

## IV. Additional Claim Fees

In determining whether additional claim fees are due, reference is made to the Fee Calculation Table (below).

**Fee Calculation Table**

| | Claims Remaining After Amendment | | Highest Number Previously Paid For | Present Extra | Rate | Additional Fee |
|---|---|---|---|---|---|---|
| Total (37 CFR 1.16(c)) | 23 | Minus | 39 | = 0 | x $50 = | $ 0.00 |
| Independent (37 CFR 1.16(b)) | 9 | Minus | 4 | = 5 | x $200 = | $ 1000.00 |

As set forth in the Fee Calculation Table (above), Applicants previously paid claim fees for thirty-nine (39) total claims and for four (4) independent claims. Therefore, Applicants hereby authorize the Commissioner to charge the credit card identified on the enclosed Form PTO-2038 in the amount of $1000.00 for the presentation of five (5) independent claims over four (4). Although Applicants believe that no other fees are due, the Commissioner is hereby

authorized to charge Deposit Account No. 50-2198 for any fee deficiencies associated with filing this paper.

## V. Conclusion

Applicants believe that the application appears to be in form for allowance. Accordingly, reconsideration and allowance thereof is respectfully requested.

The Examiner is invited to contact the undersigned at the below-listed telephone number regarding any matters relating to the present application.

Respectfully submitted,

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